FACT SHEET FOR NPDES PERMIT WA-002043-5
FACILITY NAME: Everson Sewage Treatment Plant

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INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48 RCW which defines the Department of Ecology's authority and obligations in administering the Wastewater Discharge Permit Program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), technical criteria for discharges from municipal wastewater treatment facilities (Chapter 173-221 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty (30) days before the permit is issued (WAC 173-220-050). The fact sheet and draft permit are available for review (see Appendix A--Public Involvement of the fact sheet for more detail on the public notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Comments and the resultant changes to the permit will be summarized in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	City of Everson Wastewater Treatment Plant
Facility Name and Address	101 Park Drive Everson, WA 98247
Type of Treatment	Activated Sludge (Oxidation Ditch)
Discharge Location	Nooksack River Latitude: 48° 55' 06" N Longitude: 122° 20' 58" W
Waterbody ID Number	WA-01-1050

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

HISTORY

The present wastewater collection system and treatment plant was installed in 1971. Prior to this, citizens in the two towns of Everson and Nooksack relied on individual septic systems. The treatment facility serves a combined population of 2960 for both Nooksack (910) and Everson (2050). The system was upgraded and expanded in 1989.

The review of discharge monitoring reports (DMR's) submitted during the last permit cycle indicated that the Permittee complied with the permit concentration limits, although on a few occasions it violated mass emission limits. There are three outfalls connected to Everson's wastewater treatment plant. The city's primary outfall is located at latitude 48° 55' 06" north and -122° 20' 58" west. Outfall #2 is hydraulically limited during peak flows and discharges into a backwater of the Nooksack River. Outfall #2 is not presently used. Outfall #3 was constructed in 1972 and has served as an overflow/bypass from pump station #4. Because this outfall would discharge untreated sewage, the outfall will not be permitted and any discharge from this outfall is prohibited and is an unpermitted discharge.

The primary outfall is equipped with an effluent pump station that discharges directly into the Nooksack River at midstream. This outfall was shortened by several feet in 2000 since river sediments were found to be blocking the opening. The diffuser was lost during the previous winter.

Wastewater treatment plants are classified by the volume for which they have been designed. Everson's system has been designed to handle between one and ten million gallons a day of wastewater, making it a Class II plant. This classification requires that operators with Group II certification be responsible for the process control changes. Operators with Group I classification are suitable for daily operations. There are currently two operators assigned to this plant. Both have Group II certification and are responsible for the treatment plant operation and collection system.

The wastewater quality of the wastewater treatment plant is typical for domestic treatment with no categorical or major industrial user contributions. However, past effluent analysis has indicated the presence of some toxic chemicals above the water quality criteria. Everson performed whole effluent toxicity (WET) testing during the 1995 to 2000 permit cycle because chlorine, dieldrin, and heavy metals were indicated in the city's permit application. Through several years of consistent WET testing, it has been found that toxicity levels were below water quality limits and the rigorous schedule of WET testing was discontinued.

Solids are wasted at the rate of 1500 gallons per day with 1.8 % solids. The wasted sludge is regularly hauled away for further treatment and land application. The sludge quality is acceptable by the Whatcom County Health Department for the land application but it is to be determined whether it complies with the new 40 CFR 503. This permit contains monitoring requirements in accordance with 40 CFR 503 regulations to ensure sludge quality compliance.

COLLECTION SYSTEM STATUS

Everson's collection system consists of ten pump stations, including three in the town of Nooksack, to convey waste water from Everson and Nooksack to Everson's wastewater treatment plant. Influent flow enters the plant via gravity from the town of Everson. A force main pumps sewage from Nooksack. Pump stations are cleaned twice a year. As mentioned above, the sewage treatment facility was originally built in 1971 and was upgraded and expanded in 1988. During the expansion in 1988, the city of Nooksack installed its collection system and was added to Everson's collection system. The wastewater system serves a combined domestic population for the cities of Nooksack and Everson. The present population of Everson is 2050 and Nooksack is 910 for a total population serviced by this treatment facility of 2960. In January 1991, the city of Everson submitted an addendum to the 1988 Engineering Report which was an evaluation of the available treatment capacity of the facility and it contained a recommendation and information on capacity improvement through process control adjustment. This report was approved on January 20, 1995.

The city of Everson's collection system is nearly thirty years old. It is presently maintained by a staff of two that also run the wastewater treatment facility. In 1992 the city completed a survey of all of the sanitary sewer manholes to determine which ones required rehabilitation. As a result, the survey found 50 manholes to be in need of some sort of rehabilitation. Rehabilitation was accomplished through pressure grouting of leaking joints, installation of lid gaskets, and epoxy lining of riser sections. This work was completed in stages from 1993 through 1995. In 1997 an inflow and infiltration evaluation report was conducted. It was determined in the report that in normal wet weather years that I&I did not exceed EPA criteria.

TREATMENT PROCESSES

The treatment process consists of influent screening, biological treatment through activated sludge in the facility's oxidation ditch, secondary clarification, chlorine disinfection, and dechlorination by sodium metabisulfide prior to discharge to the Nooksack River. Waste water flows through a filter screen and into one of two oxidation ditches. The screenings are collected in a dumpster and hauled weekly to a landfill. The average yearly residence time for solids in the oxidation ditch is eighteen days. Decant from the oxidation ditches combines and is directed to two secondary clarifiers. Return activated sludge (RAS) is continuously withdrawn from the bottom of the clarifiers and returned to the headworks. Clarified effluent is routed to a chlorine contact chamber and is disinfected with chlorine. The effluent is dechlorinated by a drip-system of sodium metabisulfide at the end of the chlorine contact chamber, before it exits the system over a weir and into the outfall. Any solids found in the contact chamber are cleaned weekly. Effluent flow is measured as it passes by an in-line magnetic meter just upstream of the chlorine contact chamber. For a pictorial view of Everson's system, please refer to the diagram and flow chart of the facility in Appendix E.

There is one industrial user, Nylatech, that manufactures nylon fittings for wholesale. There are several commercial restaurants within the two city-limits that add oil and grease to the collection system, as well as domestic dischargers. Oils and grease are not microbially digested and can be a burden on wastewater treatment facilities. In the past, oil and grease has been a challenge for Everson. Oil and grease becomes fixed to the inside of sewer lines and takes up needed treatment space in the wastewater plant.

As mentioned above, Everson's wastewater facility is Class II due to its ranking by total volume. The two operators are certified as Class II operators. Regular business hours for the two staff are from 8 to 5, Monday through Friday, though testing of both influent and effluent occurs seven days a week. The staff maintains operation of the wastewater treatment plant, the water treatment plant, the sewer collection system, and public water conveyance system for both Nooksack and Everson.

DISCHARGE OUTFALL

Historically there have been three outfalls, one of which (outfall #3) was constructed in 1972 and has served as an overflow/bypass from pump station #4. Because this outfall would discharge untreated sewage, the outfall has not been permitted for some time and any discharge from this outfall is prohibited. Outfall #2 is located directly south of the treatment facility, is hydraulically limited during peak flows, and discharges into the backwater of the Nooksack River, and is no longer used. The new outfall (outfall #1) is equipped with an effluent pump station and discharges into the Nooksack at midstream through a diffuser. Outfall #1 was shortened in 2000 by several feet due to sediments blocking the opening. The diffuser was lost during the previous winter.

Disinfected and dechlorinated effluent is discharged from the facility via the outfall. Outfall 001 is located approximately 600 feet upstream of the wastewater treatment plant. Treated effluent is transported to the receiving water via a 14-inch diameter pipe for outfall 001, and an 8-inch pipe for outfall 002. Outfall 001 is submerged 4.5 feet in the Nooksack River at low flow and is single port. In September 2000 it was found that outfall 001 had become buried in a gravel bar. Several feet of this pipe were cut to remedy this situation.

RESIDUAL SOLIDS

The treatment facilities remove solids at the headworks (grit and screenings), secondary clarifiers, and the chlorine contact chamber, in addition to incidental solids (rags, scum, and other debris) removed as part of the routine maintenance of the equipment. Grit, rags, scum (including oil and grease), and screenings are drained and disposed of as solid waste at a landfill. Solids removed from the clarifier are treated aerobically and land applied under a permit from the Whatcom County Health District. Approximately 70,000 gallons of solids a month are hauled to Tjölker farms for land disposal.

PERMIT STATUS

The previous permit for this facility was issued on September 18, 2001. The previous permit placed effluent limitations on 5-day Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), pH, fecal coliform bacteria, and total residual chlorine.

An application for permit renewal was submitted to the Department on December 29, 2004, and accepted by the Department on March 24, 2005.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility received its last inspection on June 21, 2004. Sampling was not done during that inspection. The last Class II inspection which does include splitting samples with the facility occurred on March 18, 2003.

During the history of the previous permit, the Permittee has remained in compliance, based on Discharge monitoring reports (DMRs) submitted to the Department and inspections conducted by the Department. For the year of 2003, the city of Everson was the recipient of an award for perfect compliance. Perfect compliance means that the city complied with every article of its permit. This is difficult to attain and normally during the course of a year only two percent of the wastewater plants in the state of Washington are able to gain such an award. While Everson was able to attain perfect compliance for 2003, the table below shows noncompliance during the other periods of their permit. The majority of violations are due to wet weather events and are therefore seasonal.

Parameter	***Type***	***Units***	***Number of Violations***
BOD 5-Day	Average Monthly	lb/day	10
BOD 5-Day % Removal	Average Monthly	%	1
Suspended Solids	Average Monthly	lb/day	3
Chlorine, Total Residual	Maximum Monthly	mg/L	4

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the NPDES application and in discharge monitoring reports. The effluent is characterized as follows:

Table 1: Wastewater Characterization

Parameter	**Concentration**
BOD	10 mg/L
TSS	7 mg/L
Chlorine	0.04 mg/L
Fecal coliform bacteria	4 CFU/100mL

SEPA COMPLIANCE

Everson is an existing facility and not presently subject to SEPA. Housing developments proposed for the area will likely invoke SEPA. Upgrades to Everson's wastewater facility will require development of a Comprehensive Sewer Plan for the area.

PROPOSED PERMIT LIMITATIONS

Federal and State regulations require that effluent limitations set forth in an NPDES permit must be either technology- or water quality-based. Technology-based limitations for municipal discharges are set by regulation (40 CFR 133, and Chapters 173-220 and 173-221 WAC). Water quality-based limitations are based upon compliance with the surface water quality standards (Chapter 173-201A WAC), ground water standards (Chapter 173-200 WAC), sediment quality standards (Chapter 173-204 WAC), or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992.) The most stringent of these types of limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

The limits in this permit are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the State of Washington were determined and included in this permit. Ecology does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent**.** Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation**.** Effluent limits are not always developed for pollutants that may be in the discharge but not reported as present in the application. In those circumstances the permit does not authorize discharge of the non-reported pollutants. Effluent discharge conditions may change from the conditions reported in the permit application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), the Permittee is required to notify the Department of Ecology. The Permittee may be in violation of the permit until the permit is modified to reflect additional discharge of pollutants.

DESIGN CRITERIA

In accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed approved design criteria.

The design criteria for this treatment facility are taken from the 1991 Engineering Report prepared by Harding Lawson Associates and are as follows:

Table 2: Design Standards for Everson WWTP.

Parameter	Design Quantity
Monthly average flow (max. month)	.4233 MGD
Monthly average dry weather flow	.2070 MGD
Monthly average wet weather flow	.2758 MGD
Instantaneous peak flow	1.815 MGD
BOD_5 influent loading (for the maximum month)	886 lb/day
TSS influent loading (for the maximum month)	645 lb/day
Design population equivalent	2951

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Municipal wastewater treatment plants are a category of discharger for which technology-based effluent limits have been promulgated by federal and state regulations. These effluent limitations are given in the Code of Federal Regulations (CFR) 40 CFR Part 133 (federal) and in Chapter 173-221 WAC (state). These regulations are performance standards that constitute all known available and reasonable methods of prevention, control, and treatment for municipal wastewater.

The following technology-based limits for pH, BOD_5, and TSS are taken from Chapter 173-221 WAC with the exception of fecal coliform:

Table 3: Technology-based Limits.

Parameter	Limit
pH	Shall be within the range of 6 to 9 standard units.
Fecal Coliform Bacteria	Monthly Geometric Mean = 28[1] organisms/100 mL Weekly Geometric Mean = 400 organisms/100 mL
BOD_5 (concentration)	Average Monthly Limit is the most stringent of the following: - 30 mg/L (106 lb/day) - may not exceed fifteen percent (15%) of the average influent concentration Average Weekly Limit = 45 mg/L (159 lb/day)
TSS (concentration)	Average Monthly Limit is the most stringent of the following: - 30 mg/L (97 lb/day) - may not exceed fifteen percent (15%) of the average influent concentration Average Weekly Limit = 45 mg/L (146 lb/day)

The technology-based limitations for fecal coliform bacteria are normally derived from state or federal water quality standards; however, in this case the technology limits are derived from all known, available, and reasonable technologies (AKART). AKART, as it relates to fecal coliform bacteria in this permit, is the limit that Everson's wastewater treatment plant has complied with over the five-year period of its current permit. AKART is defined in WAC 173-201A-020 as "all known, available, and reasonable methods of prevention, control, and treatment." It further states that, "AKART shall represent the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge." A federal provision [40 CFR 402 (0)] prohibits permit conditions or standards that are less stringent than those established in the past permit. The existing permit has a fecal coliform bacteria limit of **28 CFU/<u>mg/L</u>** as an **average monthly limit**, and **400 CFU/<u>mg/L</u>** as an **average weekly limit.** These lower limits were instituted because a TMDL was implemented in 2000 for the Nooksack River. The facility has been able to comply with them through the last permit cycle.

[1] Total Maximum Daily Load (TMDL) for fecal coliform bacteria has been developed for this basin, which is more restrictive than that listed.

The following technology-based mass limits are based on WAC 173-220-130(3)(b) and 173-221-030(11)(b).

Monthly BOD effluent mass loadings (lb/day) were calculated as the maximum monthly design flow (.4233 MGD) X concentration limit (30 mg/L) X 8.34 (conversion factor) = mass limit 106 lb/day.

Weekly BOD effluent mass loadings (lb/day) were calculated as the maximum monthly flow (.4233 MGD) X concentration limit (45 mg/L) X 8.34 (conversion factor)= mass limit 159 lb/day.

Monthly TSS effluent mass loading (lb/day) was calculated as the maximum influent design criteria (645 lb/day) X 0.15 = 97 lb/day

Weekly TSS effluent mass loading (lb/day) was calculated as 97 lb/day X 1.5 = 146 lb/day.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established surface water quality standards. The Washington State surface water quality standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Water quality-based effluent limitations may be based on an individual waste load allocation (WLA) or on a WLA developed during a basin-wide total maximum daily loading study (TMDL). The water quality-based limits presented in this permit are developed from the recent TMDL for the Nooksack River basin.

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are numerical values set forth in the state of Washington's water quality standards for surface waters (Chapter 173-201A WAC). They specify the levels of pollutants allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the water quality standards are used along with chemical and physical data for the waste water and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit.

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The state was issued 91 numeric water quality criteria for the protection of human health by the U.S. EPA (EPA 1992). These criteria are designed to protect humans from cancer and other diseases and are primarily applicable to fish and shellfish consumption and drinking water from surface waters.

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair

aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the state of Washington.

ANTIDEGRADATION

The State of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for adverse impact on the aquatic biota, human health, and existing or characteristic waterbody uses.

MIXING ZONES

The water quality standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to the Nooksack River, which is designated as a Class A receiving water in the vicinity of the outfall. Significant nearby non-point sources of pollutants include stormwater run-off from roads, dairy farms, hobby farms, and agricultural activities. Characteristic uses include the following:

Water quality of this class shall markedly and uniformly exceed the requirements for all or substantially all uses.

Class A (Excellent) water supply (domestic, industrial, agricultural); stock watering; fish migration; fish and shellfish rearing, spawning and harvesting; wildlife habitat; primary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota, however, a TMDL for fecal coliform bacteria has been developed for this basin which is more restrictive than in the reference listed. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below:

Fecal Coliforms	28 organisms/100 mL geometric mean
Dissolved Oxygen	8 mg/L minimum
Temperature	18 degrees Celsius maximum or incremental increases above background
pH	6.5 to 8.5 standard units
Turbidity	less than 5 NTUs above background
Toxics	No toxics in toxic amounts (see Appendix C for numeric criteria for toxics of concern for this discharge)

CONSIDERATION OF SURFACE WATER QUALITY-BASED LIMITS FOR NUMERIC CRITERIA

Pollutant concentrations in the proposed discharge exceed water quality criteria with technology-based controls which the Department has determined to be AKART. A mixing zone is authorized in accordance with the geometric configuration, flow restriction, and other restrictions for mixing zones in Chapter 173-201A WAC and are defined as follows:

	Acute	Chronic
Aquatic Life	11.3:1	55:1

Pollutants in an effluent may affect the aquatic environment near the point of discharge (near-field) or at a considerable distance from the point of discharge (far-field). Toxic pollutants, for example, are near-field pollutants—their adverse effects diminish rapidly with mixing in the receiving water. Conversely, a pollutant such as BOD is a far-field pollutant whose adverse effect occurs away from the discharge even after dilution has occurred. Thus, the method of calculating water quality-based effluent limits varies with the point at which the pollutant has its maximum effect.

The derivation of water quality-based limits also takes into account the variability of the pollutant concentrations in both the effluent and the receiving water.

Parameter	**Value used**
7Q10 low flow	148 cfs
Velocity	2.18 ft/sec
Depth	0.96 feet
Width	70.8 feet
Roughness (Manning)	n=0.039
Slope	4.12 E-03 (0.24 degrees)
Temperature	15^{o} C
pH (high)	7.9
Dissolved Oxygen	8.0 mg/L
Total Ammonia-N	0.07 mg/L
Fecal Coliform	41/100 mL dry weather (>100/100 mL storm related)
Salinity	NA
Turbidity	20 NTU
Hardness	120 mg/L
Lead	1.0 µg/L
Copper	5.0 µg/L
All Other Metals	0.0 (below detection limits)

BOD_5--Under critical conditions there is no predicted violation of the water quality standards for surface waters. Therefore, the technology-based effluent limitation for BOD_5 was placed in the permit.

Temperature--Under critical conditions there is no predicted violation of the water quality standards for surface waters. Therefore, no effluent limitation for temperature was placed in the proposed permit.

pH--Under critical conditions there is no predicted violation of the water quality standards for surface waters. Therefore, the technology-based effluent limitations for pH were placed in the permit and temperature was not limited.

Fecal Coliform--Under critical conditions there is no predicted violation of the water quality standards for surface waters with the technology-based limit provided in this permit. Therefore, the technology-based effluent limitation for fecal coliform bacteria was placed in the proposed permit.

Toxic Pollutants--Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the water quality standards for surface waters or from having surface water quality-based effluent limits.

The following toxics were determined to be present in the discharge: chlorine, dibromochloromethane, chloroform, bromodichloromethane, Bis (2-ethylhexl) phthalate, chromium, copper, and lead. Chromium and lead were found to be present at the practical quantitation limit (PQL). A reasonable potential analysis (See Appendix C) was conducted on these parameters to determine whether or not effluent limitations would be required in this permit. It has been determined through this process that there is not a reasonable potential for dibromochloromethane, chloroform, bromodichloromethane, Bis(2-ethylhexl)phthalate, chromium, copper, or lead to exceed water quality criteria.

No valid ambient background data was available for dibromochloromethane, bromodichloromethane, or Bis(2-ethylhexl)phthalate. A determination of reasonable potential using zero for background resulted in no reasonable potential.

Water quality criteria for metals in Chapter 173-201A WAC are based on the dissolved fraction of the metal.

The Permittee may provide data clearly demonstrating the seasonal partitioning of the dissolved metal in the ambient water in relation to an effluent discharge. Metals criteria may be adjusted on a site-specific basis when data is available clearly demonstrating the seasonal partitioning in the ambient water in relation to an effluent discharge.

Metals criteria may also be adjusted using the water effects ratio approach established by USEPA, as generally guided by the procedures in USEPA Water Quality Standards Handbook, December 1983, as supplemented or replaced.

Effluent limits were derived for chlorine, which were determined to have a reasonable potential to cause a violation of the water quality standards. Effluent limits were calculated using methods from EPA, 1991, as shown in Appendix C.

The resultant effluent limits are as follows:

	Average Monthly Limit	**Maximum Daily Limit**
Chlorine	.1 mg/L	0.2 mg/L

WHOLE EFFLUENT TOXICITY

The water quality standards for surface waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing.

Toxicity caused by unidentified pollutants is not expected in the effluent from this discharge as determined by the screening criteria given in Chapter 173-205 WAC. Therefore, no whole effluent toxicity testing is required in this permit. The Department may require effluent toxicity testing in the future if it receives information that toxicity may be present in this effluent.

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Acute toxicity tests measure mortality as the significant response to the toxicity of the effluent. Dischargers who monitor their wastewater with acute toxicity tests are providing an indication of the potential lethal effect of the effluent to organisms in the receiving environment.

Chronic toxicity tests measure various sublethal toxic responses such as retarded growth or reduced reproduction. Chronic toxicity tests often involve either a complete life cycle test of an organism with an extremely short life cycle or a partial life cycle test on a critical stage of one of a test organism's life cycles. Organism survival is also measured in some chronic toxicity tests.

Accredited WET testing laboratories have the proper WET testing protocols, data requirements, and reporting format. Accredited laboratories are knowledgeable about WET testing and capable of calculating an NOEC, LC_{50}, EC_{50}, IC_{25}, etc. All accredited labs have been provided the most recent version of the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, which is referenced in the permit. Any Permittee interested in receiving a copy of this publication may call the Ecology Publications Distribution Center at 360-407-7472 for a copy. Ecology recommends that Permitees send a copy of the acute or chronic toxicity sections(s) of their permits to their laboratory of choice.

Human Health

Washington’s water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

The discharge will be reevaluated for impacts to human health at the next permit reissuance.

A determination of the discharge's potential to cause an exceedence of the water quality standards was conducted as required by 40 CFR 122.44(d). The reasonable potential determination was evaluated with procedures given in the *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001) and the Department's *Permit Writer's Manual* (Ecology Publication 92-109, July 1994). The determination indicated that the discharge has no reasonable potential to cause a violation of water quality standards, thus an effluent limit is not warranted.

SEDIMENT QUALITY

The Department has promulgated aquatic sediment standards (Chapter 173-204 WAC) to protect aquatic biota and human health. These standards state that the Department may require Permitees to evaluate the potential for the discharge to cause a violation of applicable standards (WAC 173-204-400).

The Department has determined through a review of the discharger characteristics and effluent characteristics that this discharge has no reasonable potential to violate the sediment management standards.

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated ground water quality standards (Chapter 173-200 WAC) to protect uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

This Permittee has no discharge to ground and therefore no limitations are required based on potential effects to ground water.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

Monitoring for BOD, TSS, pH, fecal coliform bacteria, and chlorine are being required to further characterize the effluent. These pollutants could have a significant impact on the quality of the surface water.

Monitoring of sludge quantity and quality is necessary to determine the appropriate uses of the sludge. Sludge monitoring is required by the current state and local solid waste management program and also by EPA under 40 CFR 503.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring. The required monitoring frequency is consistent with agency guidance given in the current version of Ecology's *Permit Writer's Manual* (July 1994) for wastewater treatment facilities using activated sludge with oxidation ditches.

LAB ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories.* The present accreditation is from August 8, 2004, to August 8, 2005. The laboratory at this facility is accredited for (list parameters):

BOD_5, TSS, pH, total residual chlorine, fecal coliform bacteria, and DO.

Parameter	***Method***
BOD	SM 5210 B
Chlorine Total Residual	SM 4500-Cl G
Dissolved Oxygen	SM 4500-O G
pH	SM 4500-H
Solids Total Suspended	SM 2540 D
Fecal Coliform Bacteria	SM 9222 D

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

PREVENTION OF FACILITY OVERLOADING

Overloading of the treatment plant is a violation of the terms and conditions of the permit. To prevent this from occurring, RCW 90.48.110 and WAC 173-220-150 require the Permittee to take the actions detailed in proposed permit Requirement S.4 to plan expansions or modifications before existing capacity is reached and to report and correct conditions that could result in new or increased discharges of pollutants. Condition S.4 restricts the amount of flow.

OPERATION AND MAINTENANCE (O&M)

The proposed permit contains Condition S.5 as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

RESIDUAL SOLIDS HANDLING

To prevent water quality problems, the Permittee is required in permit Condition S7 to store and handle all residual solids (grit, screenings, scum, sludge, and other solid waste) in accordance with the requirements of RCW 90.48.080 and state water quality standards.

The final use and disposal of sewage sludge from this facility is regulated by U.S. EPA under 40 CFR 503. The disposal of other solid waste is under the jurisdiction of the Whatcom County Health Department.

PRETREATMENT

To provide more direct and effective control of pollutants discharged to the sanitary sewer, the Permittee is required under 40 CFR Part 403 to develop a pretreatment program to detect and enforce against violations of categorical pretreatment standards promulgated under the federal Clean Water Act.

An industrial user survey is required to determine the extent of compliance of all industrial users of the sanitary sewer and wastewater treatment facility with federal pretreatment regulations (40 CFR Part 403 and Sections 307(b) and 308 of the Clean Water Act), with state regulations (Chapter 90.48 RCW and Chapter 173-216 WAC), and with local ordinances.

As sufficient data becomes available, the Permittee shall, in consultation with the Department, reevaluate its local limits in order to prevent pass through or interference. Upon determination by the Department that any pollutant present causes pass through or interference, or exceeds established sludge standards, the Permittee shall establish new local limits or revise existing local limits as required by 40 CFR 403.5. In addition, the Department may require revision or establishment of local limits for any pollutant that causes an exceedence of the water quality standards or established effluent limits, or that causes whole effluent toxicity. The determination by the Department shall be in the form of an Administrative Order. In order to develop these local limits, the Department will provide environmental criteria or limits for the various pollutants of concern.

The Department may modify this permit to incorporate additional requirements relating to the establishment and enforcement of local limits for pollutants of concern. Any permit modification is subject to formal due process procedures pursuant to state and federal law and regulation.

Federal and State Pretreatment Program Requirements

Under the terms of the addendum to the "Memorandum of Understanding between Washington Department of Ecology and the United States Environmental Protection Agency, Region 10" (1986), the Department of Ecology (Department) has been delegated authority to administer the Pretreatment Program (i.e. act as the Approval Authority for oversight of delegated Publicly Owned Treatment Works (POTWs))**.** Under this delegation of authority, the Department has exercised the option of issuing wastewater discharge permits for significant industrial users discharging to POTWs which have not been delegated authority to issue wastewater discharge permits.

There are a number of functions required by the Pretreatment Program which the Department is delegating to such POTWs because they are in a better position to implement the requirements (e.g. tracking the number and general nature of industrial dischargers to the sewerage system). The requirements for a Pretreatment Program are contained in Title 40, Part 403 of the Code of Federal Regulations. Under the requirements of the Pretreatment Program (40 CFR 403.8(f)(1)(iii)), the Department is required to approve, condition, or deny new discharges or a significant increase in the discharge for existing significant industrial users (SIUs) (40 CFR 403.8 (f)(1)(i)).

The Department is responsible for issuing State Waste Discharge Permits to SIUs and other industrial users of the Permittee's sewer system. Industrial dischargers must obtain these permits from the Department prior to the Permittee accepting the discharge (WAC 173-216-110(5)) (Industries discharging wastewater that is similar in character to domestic wastewater are not required to obtain a permit. Such dischargers should contact the Department to determine if a permit is required.). Industrial dischargers need to apply for a State Waste Discharge Permit sixty (60) days prior to commencing discharge. The conditions contained in the permits will include any applicable conditions for categorical discharges, loading limitations included in contracts with the POTW, and other conditions necessary to assure compliance with state water quality standards and biosolids standards.

The Department requires this POTW to fulfill some of the functions required for the Pretreatment Program in the NPDES permit (e.g. tracking the number and general nature of industrial dischargers to the sewage system). The POTW's NPDES permit will require that all SIUs currently discharging to the POTW be identified and notified of the requirement to apply for a wastewater discharge permit from the Department. None of the obligations imposed on the POTW relieve an industrial or commercial discharger of its primary responsibility for obtaining a wastewater discharge permit (if required), including submittal of engineering reports prior to construction or modification of facilities (40 CFR 403.12(j) and WAC 173-216-070 and WAC 173-240-110, et seq.).

Wastewater Permit Required

RCW 90.48 and WAC 173-216-040 require SIUs to obtain a permit prior to discharge of industrial waste to the Permittee's sewerage system. This provision prohibits the POTW from accepting industrial wastewater from any such dischargers without authorization from the Department.

Requirements for Routine Identification and Reporting of Industrial Users

The NPDES permit requires non-delegated POTWs to "take continuous, routine measures to identify all existing, new, and proposed SIUs and potential significant industrial users (PSIUs) discharging to the Permittee's sewerage system." Examples of such routine measures include regular review of business tax licenses for existing businesses and review of water billing records and existing connection authorization records. System maintenance personnel can also be diligent during performance of their jobs in identifying and reporting as-yet unidentified industrial dischargers. Local newspapers, telephone directories, and word-of-mouth can also be important sources of information regarding new or existing discharges. The POTW is required to notify an industrial discharger, in writing, of their responsibilities regarding application for a state waste discharge permit and to send a copy of the written notification to the Department. The Department will then take steps to solicit a state waste discharge permit application.

Annual Submittal of List of Industrial Users

This provision requires the POTW to submit annually a list of existing and proposed SIUs and PSIUs. This requirement is intended to update the Department on an annual basis of the status of industrial users in the POTW's service area, without requiring the POTW to go through the process of performing a formal Industrial User Survey. This provision is normally applied to

POTWs not serving industrial or commercial users. Although this permit does not require performance of an Industrial User Survey, the Permittee is nevertheless required under the previous section, to take adequate continuous routine measures to identify existing and new industrial discharges.

Duty to Enforce Discharge Prohibitions

This provision prohibits the POTW from authorizing or permitting an industrial discharger to discharge certain types of waste into the sanitary sewer. The first portion of the provision prohibits acceptance of pollutants which cause pass through or interference. The definitions of pass through and interference are in Appendix B of the fact sheet.

The second portion of this provision prohibits the POTW from accepting certain specific types of wastes, namely those which are explosive, flammable, excessively acidic, basic, otherwise corrosive, or obstructive to the system. In addition, wastes with excessive BOD, petroleum-based oils, or which result in toxic gases are prohibited to be discharged. The regulatory basis for these prohibitions is 40 CFR Part 403, with the exception of the pH provisions which are based on WAC 173-216-060.

The third portion of this provision prohibits certain types of discharges unless the POTW receives prior authorization from the Department. The discharges include cooling water in significant volumes, stormwater and other direct inflow sources, and wastewaters significantly affecting system hydraulic loading, which do not require treatment.

Support by the Department for Developing Partial Pretreatment Program by POTW

The Department has committed to providing technical and legal assistance to the Permittee in fulfilling these joint obligations, in particular, assistance with developing an adequate sewer use ordinance, notification procedures, enforcement guidelines, and developing local limits and inspection procedures.

EFFLUENT MIXING STUDY

The Department has estimated the amount of mixing of the discharge within the authorized mixing zone to determine the potential for violations of the water quality standards for surface waters (Chapter 173-201A WAC). Condition S.8 of this permit requires the Permittee to more accurately determine the mixing characteristics of the discharge. Mixing will be measured or modeled under conditions specified in the permit to assess whether assumptions made about dilution will protect the receiving water quality outside the allotted dilution zone boundary.

OUTFALL EVALUATION

Proposed permit Condition S.9 requires the Permittee to conduct an outfall inspection and submit a report detailing the findings of that inspection. The purpose of the inspection is to determine the condition of the discharge pipe and diffusers and to determine if sediment is accumulating in the vicinity of the outfall.

GENERAL CONDITIONS

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual municipal NPDES permits issued by the Department.

PERMIT ISSUANCE PROCEDURES

PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet water quality standards, sediment quality standards, or ground water standards, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to protect human health, aquatic life, and the beneficial uses of waters of the state of Washington. The Department proposes that this permit be issued for five (5) years.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1988. Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling. USEPA Office of Water, Washington, D.C.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Metcalf and Eddy.

1991. Wastewater Engineering, Treatment, Disposal, and Reuse. Third Edition.

Tsivoglou, E.C., and J.R. Wallace.

1972. Characterization of Stream Reaeration Capacity. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

Water Pollution Control Federation.

1976. Chlorination of Wastewater.

Wright, R.M., and A.J. McDonnell.

1979. In-stream Deoxygenation Rate Prediction. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public Notice of Application (PNOA) was published on April 6, 2005, and April 13, 2005, in the *Lynden Tribune* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department published a Public Notice of Draft (PNOD) on September 29, 2005, in the *Bellingham Herald* to inform the public that a draft permit and fact sheet were available for review. Interested persons were invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents were available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments were mailed to both:

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

Department of Ecology
Bellingham Field Office
1204 Railroad Avenue Suite 200
Bellingham, WA 98225

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30)-day comment period to the address above. The request for a hearing shall indicate the interest of the party and the reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 676-2198, or by writing to the address listed above.

This permit and fact sheet were written by Mark Henderson.

APPENDIX B—GLOSSARY

Acute Toxicity--The lethal effect of a pollutant on an organism that occurs within a short period of time, usually 48 to 96 hours.

AKART--An acronym for "all known, available, and reasonable methods of prevention, control, and treatment."

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect waste water.

Average Monthly Discharge Limitation--The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month (except in the case of fecal coliform). The daily discharge is calculated as the average measurement of the pollutant over the day.

Average Weekly Discharge Limitation--The highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The daily discharge is calculated as the average measurement of the pollutant over the day.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chlorine--Chlorine is used to disinfect waste waters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic Toxicity--The effect of a pollutant on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Combined Sewer Overflow (CSO)--The event during which excess combined sewage flow caused by inflow is discharged from a combined sewer, rather than conveyed to the sewage treatment plant because either the capacity of the treatment plant or the combined sewer is exceeded.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing a minimum of four discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction Activity--Clearing, grading, excavation, and any other activity which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous Monitoring--Uninterrupted, unless otherwise noted in the permit.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Industrial User--A discharger of wastewater to the sanitary sewer which is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Infiltration and Inflow (I/I)--"Infiltration" means the addition of ground water into a sewer through joints, the sewer pipe material, cracks, and other defects. "Inflow" means the addition of precipitation-caused drainage from roof drains, yard drains, basement drains, street catch basins, etc., into a sewer.

Interference--A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Major Facility--A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--A volume that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both state and federal laws.

Pass Through--A discharge which exits the POTW into waters of the state in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of state water quality standards.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Potential Significant Industrial User--A potential significant industrial user is defined as an Industrial User which does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day; or

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).

The Department may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation Level (QL)--A calculated value five times the MDL (method detection level).

Significant Industrial User (SIU)--

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; and

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, wetlands, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids are the particulate materials in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Upset--An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration or mass of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C—TECHNICAL CALCULATIONS

Several of the Excel® spreadsheet tools used to evaluate a discharger's ability to meet Washington State water quality standards can be found on the Department's homepage at http.www:wa.gov.ecology.

				State Water Quality Standard		Max concentration at edge of...												
Parameter	Metal Criteria Translator as decimal Acute	Metal Criteria Translator as decimal Chronic	Ambient Concentration (metals as dissolved)	Acute	Chronic	Acute Mixing Zone	Chronic Mixing Zone	LIMIT REQ'D?	Effluent percentile value	Pn	Max effluent conc. measured (metals as total recoverable)	Coeff Variation	s	# of samples	Multiplier	Acute Dil'n Factor	Chronic Dil'n Factor	COMMENTS
			ug/L	ug/L	ug/L	ug/L	ug/L				ug/L	CV		n				
ammonia	1.00	1.00	135.0000	13800.0000	2700.0000	129.75	133.95	NO	0.95	0.883	60.00	0.60	0.55	24	1.29	11	55	
chromium	0.98	0.96	0.0000	15.0000	10.0000	2.69	0.54	NO	0.95	0.050	5.00	0.60	0.55	1	6.20	11	55	
lead	0.47	0.47	0.0000	13.8800	0.5400	0.26	0.05	NO	0.95	0.050	1.00	0.60	0.55	1	6.20	11	55	
chlorine	1.00	1.00	0.0000	19.0000	11.0000	26.28	5.26	YES	0.95	0.989	410.00	0.60	0.55	260	0.71	11	55	
copper	1.00	1.00	2.6294	5.9870	4.4015	5.20	3.14	NO	0.95	0.050	5.00	0.60	0.55	1	6.20	11	55	
zinc	1.00	1.00	0.0000	35.3600	32.2900	27.61	5.52	NO	0.95	0.050	49.00	0.60	0.55	1	6.20	11	55	

Revised 3/00

Parameter	Ambient Concentration (Geometric Mean) *ug/L*	Water Quality Criteria for Protection of Human Health *ug/L*	Max concentration at edge of chronic mixing zone. *ug/L*	LIMIT REQ'D?	Expected Number of Compliance Samples per Month	AVERAGE MONTHLY EFFLUENT LIMIT *ug/L*	MAXIMUM DAILY EFFLUENT LIMIT *ug/L*	Estimated Percentile at 95% Confidence	*Pn*	Max effluent conc. measured *ug/L*	Coeff Variation CV	**S**	# of samples from which # in col. K was taken *n*	Multiplier	50th percentile Effluent Conc. (When n>10)	Dilution Factor
dibromochloromethane	0.0000	0.41	0.02	NO		NONE	NONE	0.50	0.05	0.5	0.60	0.6	1	2.49		55.0
chloroform	0.0000	5.7	0.68	NO		NONE	NONE	0.50	0.05	15	0.60	0.6	1	2.49		55.0
bromodichloromethane	0.0	0.27	0.19	NO		NONE	NONE	0.50	0.05	4.1	0.60	0.6	1	2.49		55.0
Bis(2-ethylhexyl)phthalate	0.0000	1.8	0.50	NO		NONE	NONE	0.50	0.05	11	0.60	0.6	1	2.49		55.0

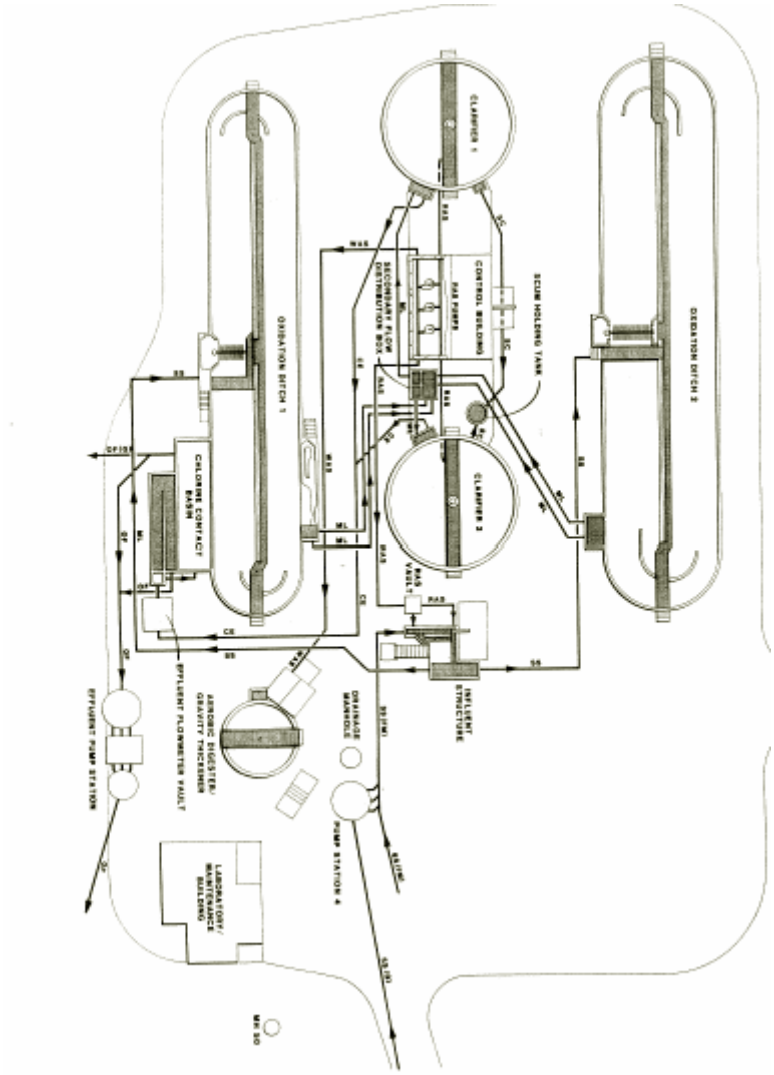
Dilution (Dil'n) factor is the inverse of the percent effluent concentration at the edge of the acute or chronic mixing zone.

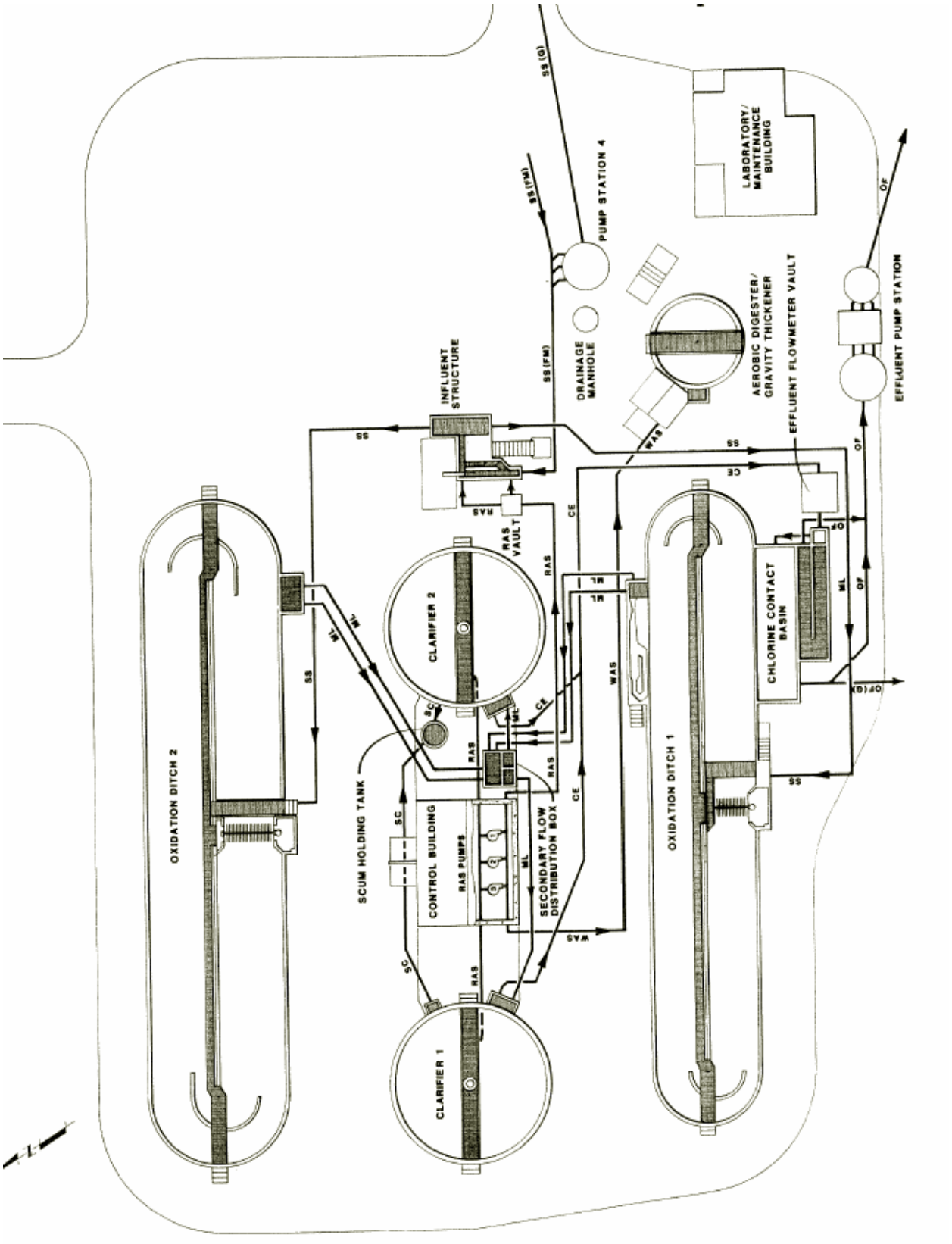
PARAMETER	Acute Dil'n Factor	Chronic Dil'n Factor	Metal Criteria Translator Acute	Metal Criteria Translator Chronic	Ambient Concentration ug/L	Water Quality Standard Acute ug/L	Water Quality Standard Chronic ug/L	Average Monthly Limit (AML) ug/L	Maximum Daily Limit (MDL) ug/L	Comments	Waste Load Allocation (WLA) and Long Term Average (LTA) Calculations: WLA Acute ug/L	WLA Chronic ug/L	LTA Acute ug/L	LTA Chronic ug/L	LTA Coeff. Var. (CV) decimal	LTA Prob'y Basis decimal	Limiting LTA ug/L	Statistical variables for permit limit calculation: Coeff. Var. (CV) decimal	AML Prob'y Basis decimal	MDL Prob'y Basis decimal	# of Samples per Month n
chlorine	11	55	1	1	0	19	11	**104.2**	**209.0**		209	605.00	67.1	319.1	0.60	0.99	67.1	0.60	0.95	0.99	4.00
																					1.00

APPENDIX D—RESPONSE TO COMMENTS

No comments were received.

APPENDIX E—FACILITY DIAGRAM




LABORATORY/ MAINTENANCE BUILDING
PUMP STATION 4
SS (FM)
DRAINAGE MANHOLE
INFLUENT STRUCTURE
AEROBIC DIGESTER/ GRAVITY THICKENER
EFFLUENT FLOWMETER VAULT
EFFLUENT PUMP STATION
OF
SS
WAS
CE
RAS
RAS VAULT
ML
CLARIFIER 2
CLARIFIER 1
CHLORINE CONTACT BASIN
OXIDATION DITCH 1
OXIDATION DITCH 2
SCUM HOLDING TANK
SC
CONTROL BUILDING
RAS PUMPS
SECONDARY FLOW DISTRIBUTION BOX